



Subject Area

Geography

Suggested Level

Years 8

Overview

This classroom activity uses the [Year Book Australia, 2008 and 2009-10 editions \(cat. no. 1301.0\)](#) to look at the distribution of population in Australia. It examines two methods to represent distribution; dot and choropleth maps. In addition, the manner in which geographers describe a distribution pattern is modelled. Factors affecting the distribution are classified into social, historical, environmental, economic and political in order to explain the distribution of population. The extension activity allows comparison with the distribution of the Indigenous population. An assessment rubric is provided.

Requirements

- Geo_03 Student: Worksheets 1 and 2. (see attachments)
- Extension activity: Geo_03 Student: Worksheet 3 Extension (see attachment)
- Assessment rubric

Instructions

1. How is the Australian population distributed?

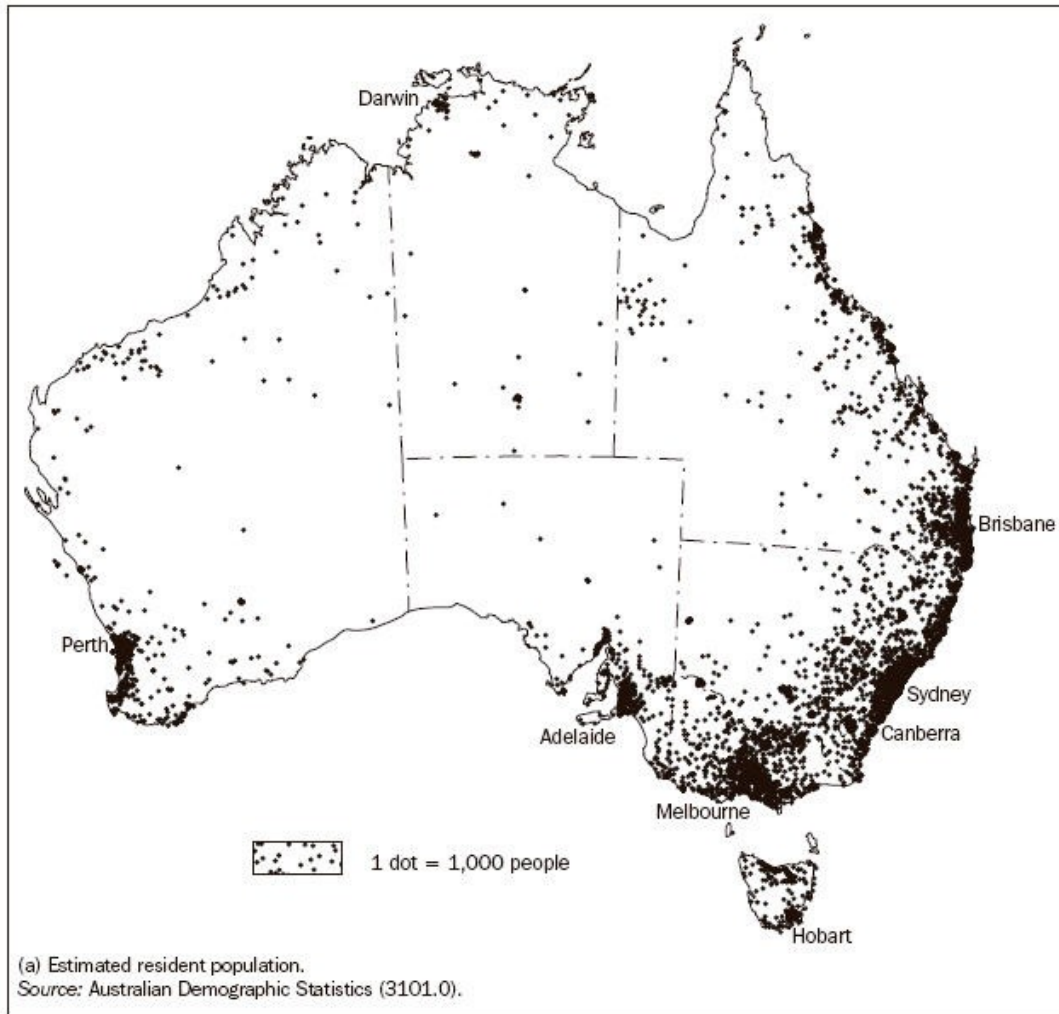
Students use prior knowledge to represent the distribution of population of Australia on a blank map of Australian states and territories (Geo_03 Student Worksheet 1).

2. What is the best way to represent the distribution of population?

Students consider the advantages and disadvantages of dot and choropleth maps to represent the distribution of population in Australia, using Geo_03 Student: Worksheet 2.



FIGURE 1: DOT MAP TO SHOW THE DISTRIBUTION OF POPULATION IN AUSTRALIA.



Source: Year Book Australia, 2008, (cat. No. 1301.0)

Answer

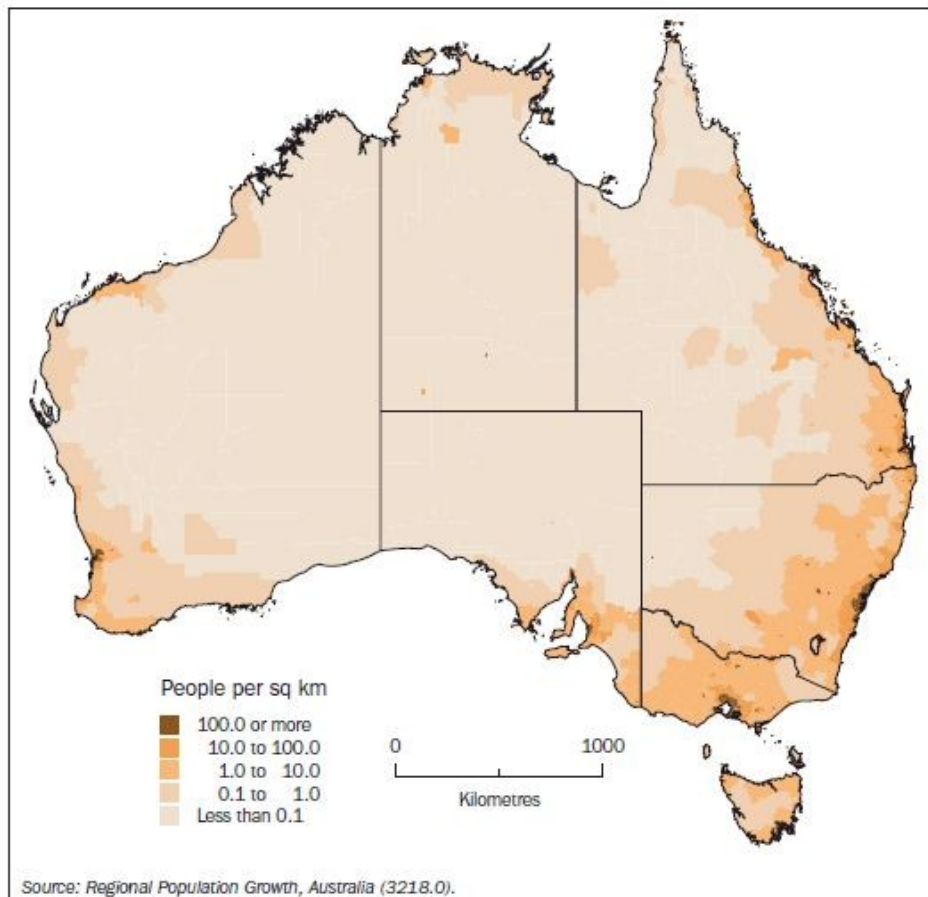
Comparison of two methods for representing population distribution

Suggested responses may include:

	Advantage	Disadvantage
Dot distribution (Figure 1)	Shows distribution more accurately	- Difficult to quantify - Dots merge together in areas where large number of people live



FIGURE 2: CHOROPLETH MAP SHOWING THE DISTRIBUTION OF POPULATION IN AUSTRALIA.



Source: Year Book Australia, 2009-2010, (cat. No. 1301.0)

Answer

Comparison of two methods for representing population distribution

Suggested responses may include:

	Advantage	Disadvantage
Distribution shown by shading (a choropleth map) (Figure 2)	Easier to quantify	- Population distribution may vary within the regions identified - Variation in colours is difficult to determine



		Map could vary depending on how the categories are created
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3. Describing the Distribution of Population

Students describe the distribution of population and support their response with data drawn from the map and appropriate geographic conventions. These guidelines may help:

- Is the population **evenly** or **unevenly** spread?
- Where do **most** people live?
- Where do **least** people live?
- What is the trend? i.e. does population decrease northwards, westwards, moving inland, and decrease evenly in all directions?
- Are there exceptions to the pattern described above?
- What examples are there (places, statistics)?
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Answer

A suggested response is provided below.

The population of Australia is unevenly distributed. Most of Australia's population is concentrated in two widely separated coastal regions - the south-east and east, and the south-west with 10-100 people per square kilometre and in the state capitals population densities of over 100 people per square kilometre. Of the two regions, the south-east and east is by far the largest in area. The population within these regions is concentrated in urban centres, particularly the state and territory capital cities.

At the other extreme, there are large areas of inland Australia with less than 1 person per square kilometre, particularly in Western and South Australia and the Northern Territory. Population density decreases moving inland in Australia. Some exceptions to this are in Queensland where there are concentrations of slightly higher population densities inland e.g. 1-10 persons per square kilometre at Mt Isa and in Victoria where population density decreases to the west and east of the state rather than inland. There are also parts of the coastline in northern WA, western SA and the NT beyond Darwin which have less than 1 person per square kilometre.

4. Explaining the Distribution of Population

Students brainstorm factors that affect the distribution of Australia's population.

Possible factors may include:

Australia's colonial history, penal settlement, attractiveness of coastal areas, sheltered harbours, access to sea for food supply, plentiful rainfall or too little, fertile soils, lowland, water supply e.g. rivers, temperatures either too cold or too



hot, raw materials e.g. gold, iron ore, coal, good agricultural potential, mechanisation of agriculture, pull of employment opportunities in large cities, government incentives to encourage inland settlement, access to sea for trade, government decisions.

5. Classifying the Factors that explain Population Distribution

Students classify the factors that affect the distribution of population of Australia (Question 5a) and go on to explain one factor in detail (Question 5b). Their classification should recognise factors which may be classified in more than one category (shown in *italics*).

A suggested classification is provided below with examples of factors falling into more than one category in *italics*.

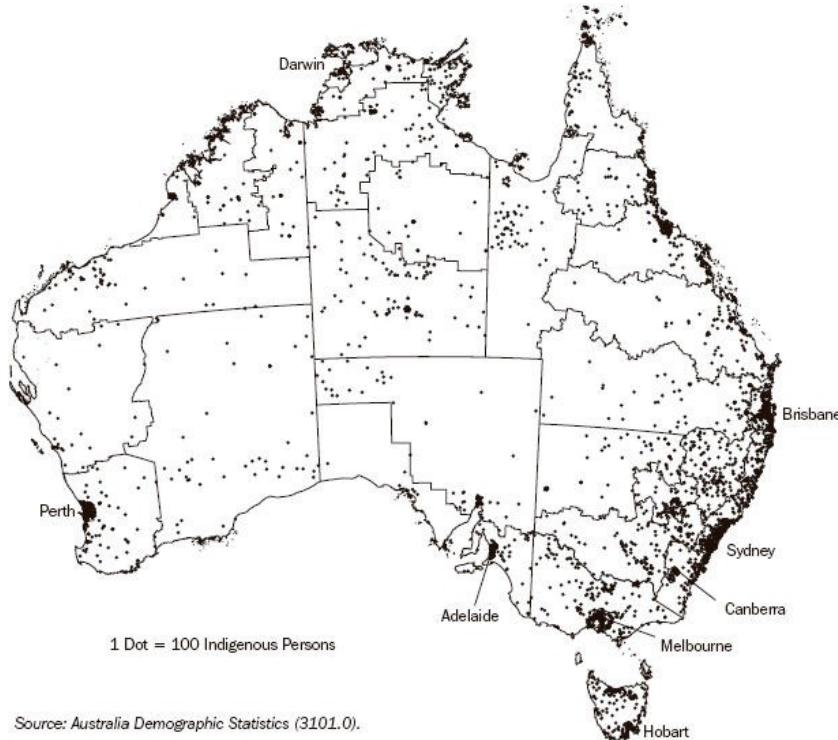
Social	Historical	Environmental	Economic	Political
<i>attractiveness of coastal areas</i>	Australia's colonial history	<i>attractiveness of coastal areas</i>	<i>good agricultural potential</i>	Government decisions
<i>mechanisation of agriculture</i>	penal settlement	sheltered harbours	<i>raw materials e.g. gold, iron ore, coal etc.</i>	<i>Government incentives to encourage inland settlement.</i>
<i>pull of employment opportunities in large cities</i>	<i>mechanisation of agriculture</i>	access to sea for food supply	<i>pull of employment opportunities in large cities</i>	
		lowland	<i>government incentives to encourage inland settlement</i>	
		plentiful rainfall or too little	<i>access to sea for trade</i>	
		fertile soils		
		water supply e.g. rivers		
		equable temperatures neither too cold nor too hot		
		<i>good agricultural potential</i>		
		<i>raw materials e.g. gold, iron ore, coal</i>		
		<i>access to sea for trade</i>		

Extension

- Students compare the distribution of the Australian population with the distribution of the Indigenous population (Figures 1 and 3 from Geo_03 Student: Worksheets 2 and 3).



FIGURE 3 DISTRIBUTION OF THE INDIGENOUS POPULATION OF AUSTRALIA



Source: Year Book Australia, 2009-2010, (cat. No. 1301.0)

Note that 1 dot = 100 Indigenous people whereas 1 dot = 1,000 people for the map of the Australian population.

Responses should recognise some of the following points:

Differences:

Variation in value of each dot

Dispersed Indigenous population and more concentrated Australian population especially on E and SE coasts

Sparsely populated areas for Australian population are areas where the Indigenous population is found e.g. Kimberley, WA, Arnhem Land, NT and N. Queensland

Concentrations of Australian population are not always matched by concentrations of Indigenous population e.g. inland Victoria and N. NSW coast.

Similarities:

Capital cities and E and SE coast show concentrations of both Indigenous and Australian people e.g. Sydney and central NSW

Some parts of the interior have a low density of population for both groups, e.g. border of WA and SA and SW Queensland.

Glossary

Distribution of Population

Distribution of population is the spread or arrangement of people over an area.

Choropleth Map

a map which shows differences by using graded shading of one colour

GEO 03-Teacher: Population Distribution

Mental Map

a map drawn from a person's own knowledge without reference to other sources

References

(Note: Links to ABS publications are to the most recent release. Previous releases can be accessed by selecting the 'Past & Future Releases' tab.)

[Year Book Australia, 2009-2010](#) (cat. no. 1301.0) available at

[A Picture of the Nation](#): the Statistician's Report on the 2006 Census, 2006 (cat.no. 2070.0)

Feedback

To provide any feedback regarding this activity, please contact ABS Education Services on 1800 623 273 or email education@abs.gov.au